





# E.B. Eddy Forest Products Ltd.

Espanola, Ontario

*"Using tall oil as a fuel in the lime kiln improves our production process. The flexibility to use this renewable resource instead of natural gas for fuel or to sell it for a fair price on the open market has removed another potential problem in the production of pulp."*

T.W. Morrow  
Pulping Superintendent  
Espanola Mill  
E.B. Eddy Forest Products Ltd.

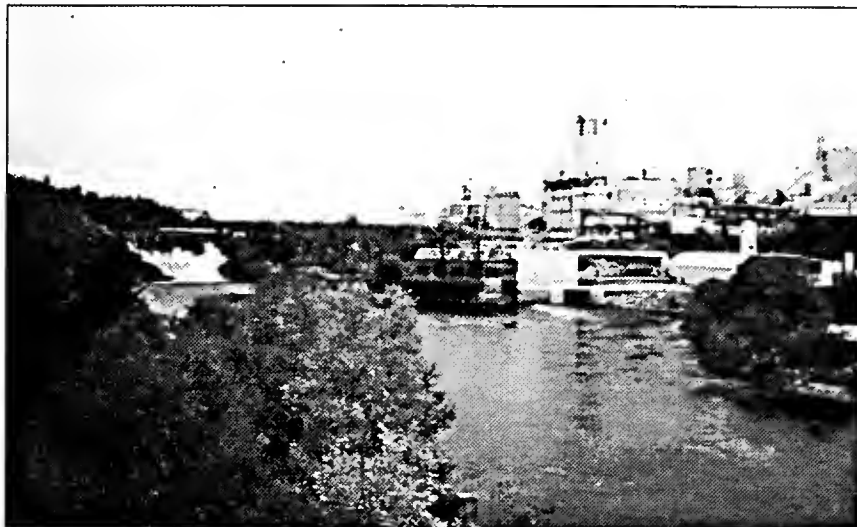
## THE COMPANY

E.B. Eddy Forest Products is a leading manufacturer of fine, specialty and packaging grade kraft papers. The company's mills at Espanola and Ottawa, Ontario, Hull, Québec, Annacis Island, B.C., and Port Huron, Michigan, produce an average of 1,310 tonnes of paper per day.

E.B. Eddy's largest facility is a kraft pulp mill at Espanola. This plant employs 820 staff and produces 1,000 tonnes per day of bleached pulp. Fifty three per cent of production is from hardwood timber while the rest is from softwood sources. The mill at Espanola supplies 52 per cent of the virgin pulp used by its two paper machines and nine others at company plants.

The company's environmental policy is to "go beyond compliance". Eighty per cent of the softwood fibre that is used by the mill at Espanola is wood waste from company sawmills. The mill gets most of its energy from a company owned hydro-electric plant and wood-fired cogeneration facility.

E.B. Eddy in 1977 was the first mill in North America to implement an oxygen delignification process, which reduced its use of bleaching chemicals by 50 per cent. The company is now working to eliminate elemental chlorine from its pulp bleaching operations.



*E.B. Eddy's Espanola Mill is located on the Spanish River near Sudbury, Ontario.*

## THE CHALLENGE

E.B. Eddy faces a challenge to decrease natural gas consumption, reduce discharges to the environment, improve competitiveness, and recycle materials and chemical byproducts in its mill operations.

One such byproduct is tall oil. Tall oil is a resinous liquid that is created in the kraft pulping operation. Tall oil is acidic and combustible and needs special handling and storage. The Espanola plant each day produces between 16,000 and 19,000 litres of this material.

Tall oil can be sold, but the market and the price for the product are unstable. The company was faced with either selling the tall oil at a loss or building special storage tanks and increasing fire protection. E.B. Eddy approached the ministry for assistance to solve the problem.

## OPPORTUNITIES

Tall oil can be burned as a fuel in the mill. This reduces the consumption of natural gas by the plant and eliminates the need for the storage tanks and the fire protection.

## ACTION TAKEN

In 1994 with assistance from the ministry, E.B. Eddy invested \$718,000 to install a system to burn tall oil in its #1 Lime Kiln, which regenerates chemicals that are used in the kraft process. The tall oil burner supplements a natural gas burner.

## RESULTS

The tall oil combustion system has saved annually over 100 million cubic feet (three million cubic meters) of natural gas and more than \$200,000 in operating costs. The need for tall oil storage tanks and extra fire protection has been eliminated. E.B. Eddy now can burn the tall oil as fuel or sell it when prices are favourable.

## REPLICATION OPPORTUNITIES

Tall oil can be burned in any pulp mill which uses the kraft process. Several large pulp mills in Ontario already burn tall oil in their lime kilns.

## PARTNERSHIP IN POLLUTION PREVENTION AND RESOURCE CONSERVATION

Industrial companies doing business in Ontario may seek ministry/industry services that will help them to:

- \* use energy and water more efficiently
- \* reduce, reuse and recycle solid waste, and
- \* reduce or eliminate liquid effluent and gaseous emissions.

Equipment and services supply companies can benefit from the information provided on technologies identified for business development.

## FOR MORE INFORMATION, PLEASE CONTACT:

Nick Cefaratti, P.Eng.  
E.B. Eddy Forest Products Ltd.  
Station Rd.  
Espanola, Ontario  
P0P 1C0  
Tel: (705) 869-2020  
Fax: (705) 869-5533

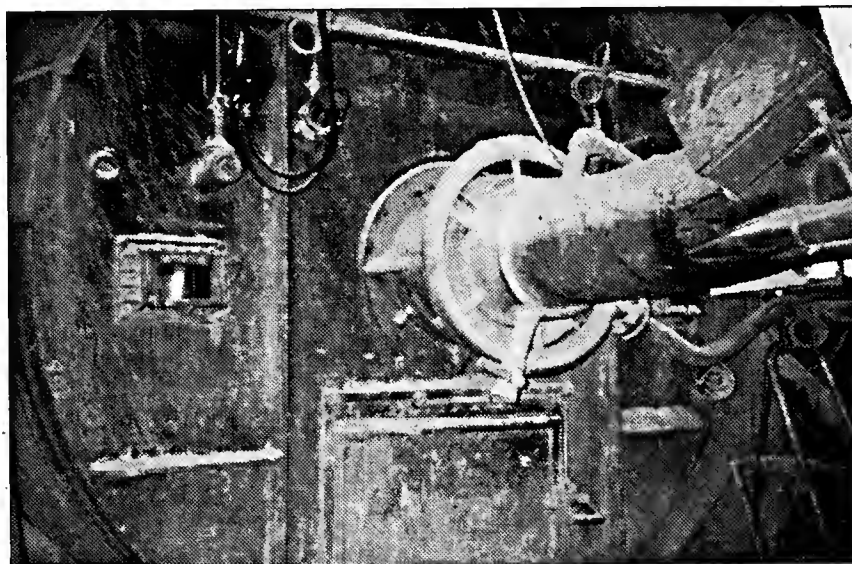
Keith Veitch  
Combustion & Energy Systems Ltd.  
85 Citizen Court, #5  
Markham, Ontario  
L6G 1A8  
Tel: (905) 415-9400  
Fax: (905) 415-9482  
E-mail: keith@fif.com

Tom Markowitz, P.Eng.  
Environmental Partnerships Branch  
Ministry of the Environment  
2 St. Clair Ave. W., 14th Floor  
Toronto, Ontario  
M4V 1L5  
Tel: (416) 327-1443  
Fax: (416) 327-1261  
E-mail: markowto@ene.gov.on.ca

## MINISTRY OF THE ENVIRONMENT SERVICES

For information on Ministry of the Environment assistance to industry, please contact the Environmental Partnerships Branch at (416) 327-1492, Fax (416) 327-1261.

For more project profiles and other publications, visit the ministry's website at <http://www.ene.gov.on.ca>



The hot flames of the lime kiln are fuelled by tall oil, a product of the pulping process.

*This project profile was prepared and published as a public service by the Ontario Ministry of the Environment. Its purpose is to transfer information to Ontario companies about industrial companies that have undertaken retrofits that improve the environment and their bottom line.*

*Publication of this profile does not imply product endorsement. The ministry does not warrant the accuracy of the contents and cannot guarantee or assume any liability for the effectiveness or economic benefits of the recommendations or the technologies described herein or that their use does not infringe privately owned rights.*

*In addition, the ministry cannot be held liable for any injury or damage to any person or property as a result of the implementation of any part of this profile.*

*Pour tout renseignement en français au sujet du programme d'écologisation industrielle du Ministère de l'Environnement, veuillez composer le 416-327-1443, télécopieur 416-327-1261.*





